

VIII. *On some moths allied to Himantopterus, with description of a new species.* By HENRY J. ELWES, F.L.S., F.Z.S., &c.

[Read March 5th, 1890.]

PLATE X.

IN describing a new species of a family which has puzzled several lepidopterists of much greater experience than myself, I feel that I am attempting a task which is impossible to accomplish fully; but, as any opinions on the classification of Heterocera must be provisional in the existing very confused and imperfect state of our knowledge, I hope that I shall at least lay a better foundation for a study of this group than we have at present.

It seems to me that descriptions of new species which are to be certainly identified by future workers, must be accompanied either by a correct illustration, or by such a comparison with their allies as may enable their distinctive characters to be appreciated. I have found that the difficulty of acquiring a correct knowledge of Lepidoptera is greatly increased by the non-comparative descriptions which are often given, so that it is not surprising that few workers have studied exotic moths, or that still fewer of those who have studied them have done so in a thorough and careful way. The literature is voluminous and scattered, and the difficulty of examining such species as the present is great, and can only be undertaken successfully with the help of a good draughtsman, or when wings denuded of their scales are prepared and mounted in such a way that they can be compared together. Having obtained the assistance of Mr. Frohawk, whose beautiful drawings contribute to make our President's recent monograph of *Tinægeria* a model for other work, I have been able to see points that I could not otherwise have seen, in the very delicate and minute venation which he illustrates.

With regard to the systematic position of these insects, Doubleday, speaking of *Thymara zaida*, says it cannot be far from the *Lithosidæ*. Walker says that they are perhaps most nearly allied to *Psychidæ*.

Westwood places *Himantopterus* with the *Arctiidæ*. Rogenhofer finds upon it a separate family, which he says is nearest to *Syntomidæ* and *Procridæ*; but he does not appear to have seen any of the Indian species.

Moore and Butler agree in placing both *Thymara* and the African species among the *Chalcosiidæ*, and in the British Museum they are arranged between *Aglaope* and *Anomæotes*, Feld., a genus occurring in the Himalaya and Angola.

Dr. Heylaerts, of Breda, who is an authority on *Psychidæ*, writes that *Himantopterus fuscineris* is by no means a Psychid, but he thinks that Walker has put it in its right place. (It stands in Walker's Catalogue between *Ræselia* and *Arctia*.)

Mr. Snellen, of Rotterdam, who is considered a high authority on Heterocera, and whose Analytical Table of the characters of the European Families of Lepidoptera shows that he has studied them comprehensively, writes to me as follows:—"I have a species allied to *Himantopterus*, namely, *Pedoptila nemopteridia*, Butl. This undoubtedly belongs to the *Zygænina* (the *Chalcosiidæ* do not form a distinct family) as a somewhat abnormal genus, and is allied to *Procris*. The male is sufficient to fix the systematic position, for it has two internal veins in the fore wing, the *Syntomina* have but one, the *Psychina* also one, but this is long and forked, basally in *Oiketiscus*, externally in *Psyche* and allied genera."

As, however, the neuration of the hind wing in *Himantopterus* is unknown, and that of *Thymara caudata* and *T. zaida* differ from each other, as well as from my species, I cannot say whether these genera should be kept separate; and if so, to which of them my species should be referred.

The same difficulty exists in the African species, which differ from each other in minute points of neuration, and in consequence have been described by Butler under three different genera; so that we have no less than two subfamilies and five genera existing for a group which consists of only nine supposed species, of which one or two may not be distinct, and only three are known

from sufficiently good specimens of both sexes to enable them to be fully described.

No doubt several others remain at present unknown to us in Africa and Asia; therefore I can only say that at present I see no good grounds for recognising more than two genera, namely, *Himantopterus* or *Thymara*, which will include all the Asiatic forms, and *Doratopteryx*, which will include those from Africa.

FAM. HIMANTOPTERIDÆ.

HIMANTOPTERIDÆ, *Rogenh.*, Sitz. der Zool. Bot. Ges. Wein., xxxiii., p. 23 (1883).

THYMARIDÆ, *Walk.*, Cat., xxxi., p. 277 (1864), sine descriptione.

Gen. HIMANTOPTERUS, *Wesmael*, Bull. Acad. Brux., iii., p. 162 (1836); *Westwood*, Trans. Ent. Soc. Lond., 1877, p. 437, t. x., d 1.

? THYMARA, *Doubl.*, Zoologist, i., p. 197 (1843).

Rogenhofer's family is based rather upon the neuration of his genus *Doratopteryx* than upon that of *Himantopterus*, which he does not appear to have seen; and as by the figure he gives of the fore wing *Doratopteryx* has only one free internal vein, whilst both *Himantopterus* and *Thymara* have two, it may be that for those who base their classification to some extent on the number of these veins, the two could not be placed in the same subfamily.

Walker gives no characters for his family *Thymaridæ*, which was created for the only two species apparently known to him, namely, *Thymara zaida*, *Doubl.*, and *T. papilionaria*, *Wlk.*, the latter of which, judging from the type (an imperfect female, which alone represents the species in the British Museum collection, though Walker describes both sexes), is not congeneric with *T. zaida*, as it has, like *Doratopteryx*, only one internal vein in the fore wings.

With regard to the genus *Himantopterus*, it is based on the single female specimen from Java, imperfectly described and figured by *Wesmael*, which, however, has been better figured by *Prof. Westwood* in our own Transactions. As I have not seen this type, I can only surmise that the vein which *Westwood* numbers 3 and calls a rudimental discoidal vein (*vena spuria* apud

Rogenhofer), is incorrectly figured,* because in all the other species, as in my own, though it is only conspicuous in the outer end of the cell, it really extends to the base of the wing, dividing the cell down the middle, and does not terminate in a free end, as shown by Westwood; and in the drawing of *Thymara zaida* by Doubleday, which in this one particular is, as I have proved by examination of the type, incorrect (*cf.* fig. 10).

Himantopterus? vel *Thymara Dohertyi*, sp. nov.

Plate X., figs. 1, 2, 4, 7, ♂, 3, 5, 6, ♀.

♂. Expands .75 in. Length of the hind wing, .70 in.; breadth, .12.

♀. Expands 1.2 in. Length of the hind wing, 1.1 in.; breadth, .05.

Length of the body, ♂ .15 in., ♀ .12 in. Antennæ, ♂ .30, ♀ .25.

Antennæ of the male broadly pectinate, the pectens minutely hairy, black. Antennæ of the female clothed with short spiny hairs, black, yellowish at the base. Head black; neck and thorax covered with coarse dark orange hairs, which also clothe the breast, base of the wings and abdomen; and in the male, are continued down the upper half of the hind wings, where they apparently take the form of scales. The remainder of the wings are apparently devoid of scales, but clothed with black hairs, thickest on the veins and centre of the hind wing, where they are a good deal mixed with the yellow scales on the veins and inner margin. Towards the end of the hind wing in both sexes a few grey or pale yellowish hairs appear. Fringes of both wings consisting of the same black hairs. Eyes prominent and smooth; palpi and tongue invisible. Legs black, slightly hairy, with two minute spurs on the joint of the tibia and tarsus in the hind legs of the male.

I cannot make out the form of the claspers, as they are thickly clothed with hair. The shape of the hind wing varies considerably in the five male specimens, so I have figured two of the most different, but the two female specimens are exactly alike.

Found in the Naga Hills at about 5000 ft. elevation in August by W. Doherty.

* From a drawing made from the type by Mr. M'Lachlan, which he has kindly lent me since the reading of this paper, I find that this surmise is correct.

SYNOPSIS OF THE SPECIES ALLIED TO HIMANTOPTERUS.

Himantopterus fuscinervis, Wesmael, Bull. Acad. Brux.,
iii., p. 162, t. vi., 1, ♀ (1836).

Java.

This specimen remains unique in the Brussels Museum, no other existing, as far as I can learn, in any Dutch or other collection. It resembles *Dohertyi* ♀ very closely in form, but differs considerably in colour.

Thymara zaida. (Pl. X., figs. 8 and 10, ♂).

Thymara zaida, Doubl., Zoologist, i., p. 197, ♂ (1843);
said to come from North India (bought of Mr.
Lewis James in 1843, *vide* Brit. Mus. Register).

Of this curious species two males only are known to exist, the types in the British Museum, and if they really were taken in India I imagine that some remote part of Assam must be the habitat, as none of the very numerous collections received since 1843 have contained it. My figure was made, with Mr. Butler's permission, from one of the type-specimens.

Thymara caudata. (Pl. X., figs. 9 and 11, ♂).

Thymara caudata, Moore, P. Z. S., 1879, p. 394, t. xxxii.,
3, ♂. (Pl. X., figs. 9 and 11).

Mr. Moore's type, which, though described as a male, is, judging by the antennæ (as figured), a female, came from Burmah, but he states that he has also seen a specimen in Mr. Farr's collection, taken by him at Pankabari. This is a rest-house at the foot of the Himalaya, on the old road to Darjeeling, and if the insect really occurs in this locality it is most extraordinary that neither Otto Möller, who resided in the immediate neighbourhood for some years, or any of the numerous native collectors in Sikkim, have ever found it. It differs in the neuration of the hind wing from *Dohertyi*, see fig. 11, which is drawn from a specimen in the British Museum, taken by Mr. Hampson in the Nilgiri Hills. This gentleman informs me that he has taken the insect not uncommonly in the Nilgiris at about 3000 ft. He has never seen it on the wing, but on two occasions has found it settled on a

leaf, and at other times has taken it by beating into an umbrella, in which it lies motionless, or with a slight quivering of the wings. In this species the antennæ agree with those of *Dohertyi* in both sexes, but the hind wings do not vary in form as in my species. Of two female specimens in Mr. Lindsay's collection, one has the abdomen of the same shape as in *Dohertyi*, but tufted with black hairs at the end, whilst the other has a very peculiar round dark woolly tuft attached to it, resembling those seen in the females of *Bombyx neustria* and some other moths. Whether, as Mr. Hampson suggests, this wool is detached after oviposition and used by the female as a covering for the eggs, I am unable to say, but it adds another difficulty to the correct classification of the species, no such appendage existing, as far as I am aware, in any of the *Zygenidæ*, *Chalcosidæ*, or allied genera.

T. papilionaria, Wlk., Cat. Het., xxxi., p. 277, ♂ ♀ (1864).

Described from East Africa; where it was discovered by Horace Waller, preserved in Mr. Walker's collection, which is now in the keeping of the Highgate Grammar School, where I have been unable to see it.

This seems very nearly allied to *Doratopteryx plumigera*, but the upper part of the hind wing is much broader, and there is a large fawn-coloured spot half-way down it. It certainly is more nearly allied to *Doratopteryx* than to *Thymara*, and has, like the former, only one free internal vein. The antennæ appear to agree very well with those of *Himantopterus*. The species is represented in the British Museum by a single imperfect female. As it is impossible to examine this specimen without much risk, it is hoped that it may be figured.

Gen. DOROPTERYX, *Rogenhofer*, Sitz. Zool. Bot. Ges. Wien., xxxiii., p. 23 (1883).

? PEDOPTILA, *Butl.*, Ann. Nat. Hist., 5th ser., vol. xv., p. 341, fig. (1885).

The neuration of *Doratopteryx* differs from that of *Thymara* in having the upper median vein and the lower radial well separated at their origin, whereas in *Thymara*

they are emitted from a short common footstalk. In *Himantopterus* they start from the same point, as also in *Pedoptila*. There is also only one free internal vein instead of two, and in the hind wings *Dorapteryx* is described as having two simple longitudinal veins, whilst *Pedoptila*, according to Butler, has three. I, however, can only see two in the type of *P. nemopteridia*. Rogenhofer says that the venation of *Pedoptila Staudingeri* differs in many points from that of *P. nemopteridia*, as shown in Butler's figure; and the comparison of the two genera by Butler in Ann. Nat. Hist., 5th ser., vol. xvi., p. 51, seems to me to show that there is hardly sufficient difference to separate them.

Dorapteryx afra, Rogenhofer, l. c., p. 24, figs. 1, 2, ♀.

Discovered by Marno between Sadani and Koakiora, near Zanzibar in East Africa. Type in Imperial Museum at Vienna. I have not seen this species.

Dorapteryx plumigera, Butl., Ann. Nat. Hist., 6th ser., vol. i., p. 48, fig. 1 (1888).

Collected by Jackson at the mouth of the River Ozy, East Africa (not anywhere near the mountain Kilimanjaro, as stated in Mr. Butler's description).

Of this there are six more or less broken specimens in the British Museum, which in colour resemble *P. nemopteridia* very closely. The two sexes differ in the antennæ much as *Thymara* does, but the hind wings are not broader in the male than in the female.

It is evidently very near *D. afra*, which I only know by description. The fawn-coloured hairs, however, extend to the end of the cell. I am unable to see clearly the veins in the hind wing, as shown by Mr. Butler. They differ from those shown in his figure of *Pedoptila* as they do from those of *Semioptila*. To enable an accurate comparison to be made they must be carefully drawn by the same artist on an enlarged scale.

Pedoptila nemopteridia, Butl., Ann. Nat. Hist., 5th ser., vol. xv., p. 341, fig.; Waterhouse, Aid, pl. 26, f. 165, 1, ♂.

Cape Coast, West Africa. Collected by Swanzy.

In the type-specimen the claspers are open, and can

be very well seen ; they are strongly hooked. The ends of the fore wings being both damaged it is not possible to see the fork of the subcostal shown in Butler's figure, and his drawing of the recurrent vein in the cell is incorrect, as I have seen in the specimen itself.

Pedoptila Staudingeri, Rogenhofer, Sitz. Zool. Bot. Ges., xxxviii., p. 61 (1888) ; id., Ann. k. k. Natur. Hof. Mus., 1889, t. xxiii., 9, ♂.

Sierra Leone, West Africa. Four males, one female, in Mus. Staudinger.

Of this Rogenhofer says that it is near *P. nemopteridia*, but differs in the broad middle cell, which is closed by a faint transverse nervure, the veins 5 and 6 springing from a common stalk, as well as by the quite differently formed hind wing, which shows inwardly an angular projection ; as also by the rounded somewhat spoon-shaped white point. This description and figure shows that this species does not agree with *Pedoptila* in venation, but has, like *Thymara*, two free internal veins, and tends to confirm my opinion that venation is too variable in this family to be used as a generic character.

Genus SEMIOPTILA, *Butl.*, Ann. Nat. Hist., 5th ser., xx., p. 180 (1887).

Semioptila torta, *Butl.*, *l. c.*

The type came from the Congo River, and is in the possession of Mr. P. Crowley, of Croydon.

Though the specimen may be sufficient to distinguish some characters, it is in such bad condition and so nearly denuded of scales that it is certainly insufficient from which to describe a species, and I am astonished that Mr. Butler should have attempted to do so. It is, however, judging by the remnants of the antennæ and by the abdomen, a female.

This genus differs from the preceding ones in having four branches to the subcostal vein, and, as far as I can see from an examination of the type, which was kindly lent me by Mr. Crowley, it has two free internal veins in the fore wing, as the last species, and only two veins in the

hind wing, the inner one of which is branched, as shown by Mr. Butler.*



* I annex a woodcut of the venation of this insect, made by Mr. Frohawk from the type-specimen, which may serve to identify the species in future, and which shows what I had not been able to see myself, and what Mr. Butler has not noticed, *viz.*, that the upper half of the cell is apparently open, though there is a faint indication of a transverse vein closing it. The hind wings also appear to be different in venation from what either Mr. Butler or I had supposed.

EXPLANATION OF PLATE X.

- FIGS. 1, 2. *H. Doubledayi*, Elwes (males).
3. Female of the same.
4. Neuration of male, enlarged.
5. Neuration of female, enlarged.
6. Antenna of female, highly magnified.
7. Antenna of male.
8. *Thymara zaida*, Doubl., ♂.
9. *T. caudata*, Moore, ♂.
10. Neuration of *T. zaida*, enlarged.
11. Neuration of *T. caudata*, enlarged.
12. Antenna of *T. caudata*.